Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

September 30, 2020

Keith Turpin, Operations Manager
Green America Recycling LLC
10107 HWY 79
Hannibal, MO 63401-7859

CONTINUING NON-COMPLIANCE

Dear Keith Turpin:

An investigation was conducted by Missouri Department of Natural Resources' staff pursuant to the Missouri Hazardous Waste Management Law of Green America Recycling LLC (GAR), based on the United States Environmental Protection Agency (EPA)'s May 14, 2019 Notice of Violation (NOV) and review of the March 11 and April 11, 2020 emergency incidents.

GAR responded to the NOV on May 24, 2019, returning some of the outstanding violations to compliance. The case was then referred from the EPA to the Department's Hazardous Waste Compliance and Enforcement Unit and an initial email was sent to GAR representatives on September 16, 2019. The email required a written response by October 1, 2019. A response was received from GAR on October 8, 2019. MoDNR replied on November 4, 2019, requiring an additional response to outstanding items still not addressed by November 20, 2019. GAR responded on November 19, 2019. After review, the Department determined the remaining violations are from the drum puncturing process. The Department responded to GAR on November 26, 2019 with a required response date of December 13, 2019, which was extended by request to December 27, 2019. A response was received December 27, 2019, but did not address the outstanding violations.

The Department responded February 14, 2020 requiring GAR to provide additional response by February 28, 2020. On February 18, 2020, GAR requested a site visit from the Department which was scheduled for and conducted on March 11, 2020. On April 11, 2020 an explosion occurred at GAR, which prompted the Department to conduct a site visit on May 7, 2020. To date, concerns with the drum puncturing procedure and the use of foam to close the holes have not been resolved.

Below is a list of the outstanding violations based on the Department's review of the current enforcement case and follow up investigations. The Code of Federal Regulations (C.F.R.s) cited below are incorporated by reference in 10 CSR 25-7.264 and 10 CSR 25-7.270.

1. **Section 260.390(1) RSMo Not construct, substantially alter or operate a hazardous waste facility without first obtaining a hazardous waste facility permit from the department as specified in section 260.395;**
   After document review and speaking with employees of GAR it was determined the Quad Shredder is not included in the facility's permit.

   Required Action: Submit a Class 3 Modification request and Temporary Authorization to begin partial closure and construction for the Quad Shredder, such as submittal of

Construction/ Destruction/ work plans (construction schedule) for the TA; and to submit Quad Shredder engineering specifications, description of monitoring devices, ancillary equipment's, and equipment design, as well as maintenance and inspection schedules, and any necessary changes to GAR/CCC's closure plan & cost estimate that are all consistent with the engineering documents that will be submitted as Class 3 modification request to GAR's Part I Permit, dated November 18, 2019.

2. **Section 260.390(2) RSMo Operate the facility according to the standards, rules and regulations adopted under sections 260.350 to 260.430 and all terms and conditions of the permit;**
   Based on observations on site and document review, the facility was not operating according to their permit.

   Required Action: Submit actions taken to minimize non-compliance in the future. This includes updating the contingency plan, employee training, reviewing on site processes, and updating Standard Operating Procedures (SOPs) and Waste Analysis Plans (WAPs).

3. **40 CFR 264.12(b) The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.**
   GAR does not have the appropriate permits to manage or dispose of GAP 5527 which was received from an off-site generator.

   Required Action: Please provide the document(s) provided to the generator of the GAP 5527 waste, stating GAR has the appropriate permits to dispose of the GAP 5527 waste. If documents are not available, provide an explanation why they are unavailable and what procedures are in place to ensure compliance in the future.

4. **40 CFR 264. 13(a)(1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or nonhazardous wastes if applicable under § 264.113(d), he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with this part and part 268 of this chapter.**

   Required Actions: GAR Fuel's Laboratory must be fully equipped to provide complete analysis of wastes received by GAR. According to GAR's WAP, explosive wastes are restricted from storage and processing, therefore when sampling and analyzing containers that may contain explosives or mixed combustible material, GAR must utilize the best available demonstrated technology to ensure explosives are not stored or processed at GAR. Please address this concern in the updated SOPs and WAP as requested above.

5. **40 CFR 264. 13(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a) of this section.**
   Based on incidents that have occurred at the GAR facility and review of documents, the waste analysis plan is not fully developed.

Required Actions: The waste analysis plan must be reviewed and updated. Reference 40 C.F.R. § 264.13 for specific requirements that must be included in the plan. **Please provide a written, detailed explanation regarding how containers of GAP solvent 5527 were received, accepted and processed at GAR without being recognized prior to the explosion. What steps in the current WAP were missed and what shortcomings have been recognized in the current plan as a result?** Include measures that will be taken to ensure explosive wastes will not be processed at GAR. Submit the updated waste analysis plan, updated SOP's, and training records for employees that are trained on the updated procedures. See the Additional Comments section of this report for specific changes requested by WMP.

6. **40 CFR 264.15(a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing—or may lead to—(1) release of hazardous waste constituents to the environment or (2) a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.**
   Based on review of recent emergency incidents at the facility, review of documents, employee statements, and operations observed on site, it was determined that GAR is not adequately identifying problems in time at the facility.

   Required Actions: GAR must review the operations that are occurring onsite and make the necessary changes to improve the waste management practices. This includes revising the contingency plan, the hazardous waste SOP's, and ensuring employees that manage hazardous waste are properly trained and follow those written procedures. Please include names and titles of staff in charge of inspecting the facility, how the facility is inspected, when the inspections occur, what processes are inspected, and how GAR plans to improve the inspection process going forward.

7. **40 CFR 264.17 The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste must be separated and protected from sources of ignition or reaction including but not limited to: open flames, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or operator must confine smoking and open flame to specially designated locations. "No Smoking" signs must be conspicuously placed wherever there is a hazard from ignitable or reactive waste.**

   (b) Where specifically required by other sections of this part, the owner or operator of a facility that treats, stores or disposes ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:
   (1) Generate extreme heat or pressure, fire or explosions, or violent reactions;
   (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;
   (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
   (4) Damage the structural integrity of the device or facility;
   (5) Through other like means threaten human health or the environment.

(c) When required to comply with paragraph (a) or (b) of this section, the owner or operator must document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses (as specified in § 264.13), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

Both the processes of shredding drums and puncturing of hazardous waste containers can produce frictional heat and have the potential to generate uncontrolled toxic mists, fumes, dusts, or gases or uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions.

Required Actions: GAR must review their hazardous waste processing procedures particularly at the shredder and drum puncturing areas. Explain what will be done to reduce accidental ignition or reaction from ignitable or reactive wastes in the future. Provide any procedures that are updated or changed in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

8. **40 CFR 264.31 Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.**
   Based on review of emergency incidents at the facility and observed violations, it was determined that GAR is not maintaining or operating the facility to minimize the possibility of release of hazardous waste.

   Required Actions: GAR must review the operations that are occurring onsite and make the necessary changes to improve the waste management practices. This includes revising the contingency plan, the hazardous waste SOP's, and ensure employees that manage hazardous waste are properly trained.

9. **Section 260.505.4, RSMo The Permittee shall at the earliest practical moment upon discovery of an emergency involving the hazardous waste under the Permittee's control, notify the Department's emergency response hotline at (573) 634-2436 and the National Response Center at 1-800-424-8802.**

   GAR did not notify the Department's emergency response hotline or the National Response Center for the explosion that occurred on April 11, 2020.

   Required Actions: Review and revise all site emergency procedures, and train personnel to ensure all employees know who to contact and when in the event of an emergency, such as any release, spill, or explosion.

10. **40 CFR 264.56(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:**
    (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(2) Notify appropriate State or local agencies with designated response roles if their help is needed.
Not all applicable state agencies and personnel were notified of the April 11, 2020 explosion.

Required Actions: Revise the emergency procedures and train personnel to ensure employees know who to contact in the event of an emergency. Submit any documents that were updated and confirm that employees have been trained on the changes by submitting training logs or other relevant documentation.

11. **40 CFR 264.56(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests, and, if necessary, by chemical analysis.**
GAR has stated that no waste was released. Based on observations at the scene, document review, and speaking to employees, it is evident that waste was released into the environment, specifically the air. While initial information was sent to the Department, not all aspects of the waste were included.

    Required Actions: GAR must submit a response in writing that includes the character, exact source, amount, and areal extent of released materials including all uncaptured emissions. Provide any supporting documents, including any sampling results that GAR preformed on the GAP 5527 waste prior to the explosion and after the explosion.

12. **40 CFR 264.56(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).**
Based on observations at the facility, document review, and speaking to employees at GAR, possible hazards were not properly assessed after the April 11, 2020 explosion.

    Required Actions: GAR must submit a response in writing that includes both direct and indirect effects of the release and explosion.

13. **40 CFR 270.30(d) In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.**
Based on observations on site and document review, GAR has not taken measures to prevent significant adverse impacts on human health or the environment while being out of compliance.

    Required Actions: GAR must review the operations that are occurring onsite and make the necessary changes to improve the waste management practices. This includes revising the contingency plan, the hazardous waste SOP's, and ensure employees that manage hazardous waste are properly trained.

14. **40 CFR 270.30(e) Proper operation and maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.**
GAR's laboratory does not have the means to analyze GAP 5527 or other reactive waste. Employees were not effectively trained to manage the hazardous waste operations on site.

    Required Actions: GAR must review the operations that are occurring onsite and make the necessary changes to improve the waste management practices. This includes revising the contingency plan, the hazardous waste SOP's, and ensuring employees that manage hazardous waste are properly trained.

15. **40 CFR 270.30(l)(6)(i) The permittee shall report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including:**
(A) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
(B) Any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility, which could threaten the environment or human health outside the facility.
MoDNR was notified of April 11, 2020 explosion on April 13, 2020 by phone.

    Required Actions: Revise the emergency procedures and train personnel to ensure employees know who to contact and when in the event of an emergency. Submit any documents that were updated and confirm that employees have been trained on the changes by submitting training records.

16. **Special Permit Conditions II. A. The Permittee shall store in containers only the hazardous wastes identified in the approved Part A Permit Application.**
The Part A Permit Application does not include GAP 5527, a D003 waste, as an approved waste.

    Required Actions: GAR must review their hazardous waste processing and storage procedures. Explain what will be done to determine a waste is non-compliant and procedures for when a noncompliant waste is received in the future. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

17. **Special Permit Conditions II. D. 264.172 The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.**
GAR uses an expanding foam to close punctured drums of hazardous waste. The hazardous waste can be incompatible with the foam which causes the foam to dissolve.

Required Actions: Using expandable foam to close the drums is not allowed. Explain how GAR will process incoming drums of hazardous waste in the future. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

18. **Special Permit Conditions II. K. 264.177 (a) Incompatible wastes, or incompatible wastes and materials (see appendix V for examples), must not be placed in the same container, unless § 264.17(b) is complied with.**
GAR uses an expanding foam to close punctured drums of hazardous waste. The hazardous waste can be incompatible with the foam which causes the foam to dissolve.

    Required Actions: Using expandable foam to close the drums is not allowed. Explain how GAR will process incoming drums of hazardous waste in the future. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

19. **§ 264.173 Management of containers. (a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.**
GAR opens the containers by puncturing them when not adding or removing waste.

    Required Actions: Puncturing of drums and using expandable foam is not allowed. Drums may only be opened for the purpose of adding or removing waste Explain how GAR will process incoming drums of hazardous waste while maintaining Container Level 1 standards in the future. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

20. **40 CFR 264.1086(b)(i)For a container having a design capacity greater than 0.1 m3 and less than or equal to 0.46 m3, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards.**
GAR has stated that all incoming drums are punctured to relieve built up pressure and for sampling. However not all drums that are punctured are sampled. The puncture hole is then sealed with an expanding foam.

    Required Actions: Puncturing of drums and using expandable foam is not allowed. Drums may only be opened for the purpose of adding or removing waste Explain how GAR will process incoming drums of hazardous waste while maintaining Container Level 1 standards in the future. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

21. **40 CFR 264.1086 (c) *Container Level 1 standards.* (1) A container using Container Level 1 controls is one of the following:(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.(ii) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap).(iii) An open-top container in which an organic-vapor**

suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam. The expanding foam used is not compatible with the contents of the containers and is not suitable for containing vapor emissions.

Required Actions: Explain how GAR will process incoming drums of hazardous waste while maintaining Container Level 1 standards. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

22. **40 CFR 264.1086(c)(2) A container used to meet the requirements of paragraph (c)(1)(ii) or (c)(1)(iii) of this section shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity, for as long as the container is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.** The expanding foam used is not compatible with the contents of the containers and is not suitable for containing vapor emissions.

    Required Actions: Explain how GAR will process incoming drums of hazardous waste while maintaining Container Level 1 standards. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

23. **40 CFR 264.1086(c)(3) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position.** The expanding foam used is not compatible with the contents of the containers and is not suitable for containing vapor emissions. Additionally if the container were to tip, the foam would not keep the container closed.
    Required Actions: Explain how GAR will process incoming drums of hazardous waste while maintaining Container Level 1 standards. Any procedures that are updated or changed, provide them in your response, and demonstrate how applicable employees are trained on the new/updated procedures.

Additional Records Requested
Please provide additional details and supporting documents for evaluation of the following requirements:

1. **40 CFR 264.16 – Personnel Training**

    Required Actions: Please provide the last 3 years of personnel training records for all employees that handle and/or manage hazardous waste on site.

2. **40 CFR 264.56(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:**

(1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
(2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

Required Actions: Please state which emergency equipment, if any, was used while responding to the explosion that occurred on April 11, 2020 and afterword while waste was still contained in the inoperable units. Explain what measures have been taken to ensure the equipment is fit for use again.

3. **40 CFR 264.56(f) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.**

   Required Actions: Please state when the monitoring took place, which emergency coordinator(s) conducted the monitoring, which equipment was monitored, and what the results were of the monitoring.

4. **40 CFR 270.30(j) - Monitoring and records.**

   Required Actions: Please provide all analytical results from samples taken by GAR, or contractors of GAR, of the drums of GAP 5527. Include any other documentation (ex: receiving notes, processing logs) on the drums. Include the 2.4.1 WPS form received from the generator of the GAP 5527 waste.

5. **According to GAR's Waste Analysis Plan, 2.4, Evaluation of Waste Streams** "Data provided by the generator will be included in the evaluation and may be relied upon as the basis for decision ***if accompanied by a detailed evaluation of the waste stream*** contents and signed certification."

   Required Action: Please provide the detailed evaluation that accompanied the drums subsequently identified as GAP 5527. In addition, explain what additional measures GAR will take to ensure waste received from off-site generators has an accurate waste determination. Update the section to include these measures.

Recommendations

1. **According to GAR's Waste Analysis Plan, Section 2.2 Restricted Wastes:** "Waste streams initially received by the facility but found to be unsuitable for fuel reuse at CCC can be stored in CSA #1, CSA #3, CSA #4, or CSA #5."

   Recommendation: If a waste received by GAR is a restricted waste, or determined to be unacceptable, it may be managed with other rejected wastes in a designated area awaiting shipment to the generator or regulated TSDF. Permitted container storage areas must keep restricted wastes separate from acceptable WDM fuels according to GAR's Fuels Laboratory, and restricted wastes shall not be managed, for storage or processing, in permitted treatment areas. Recommend updating WAP to reflect specifically how restricted wastes will be managed in the future.

2. **According to GAR's Waste Analysis Plan,Section 2.6 Prequalification Analyses:** 'The rationale for analyzing key parameters is included in Table 2: Rationale for Liquid & Solid Waste-Derived Fuel Analyses'

   Recommendation: Add Parameter- D003, Explosive/ Reactive; Reason for Analysis- Restricted material.

Additional Comments

1. **WAP, 2.6.6, Cement Kiln Dust (CKD)**
   In May 2019, GAR revised the HGAR-EHS-039 Operation, Maintenance, and Monitoring Plan (OM&M), including revisions that say 'CKD' is now managed as Bypass Dust (BPD).

   Required Action: This section, and all other sections of the application that reference CKD, shall be revised to reference the revised OM&M work plan, and/or BPD. According to a statement from Tim Schlosser, on August 31, 2020, GAR utilizes both CKD & BPD, and that these two materials are generated as two different points in the treatment process. Whereas CKD is mentioned, and BPD is not, GAR must explain how these materials are analyzed and beneficially reused onsite.

2. **WAP, Section 2.7, Table 6: Parameters and Analytical Methods**
   The table depicts "TCLP, Referenced Method(s)1 SW-846 1311, 3015, 6010, 7470, 6010A".

   Required Action: Update Section 2.7 Table 6 to only include the Toxicity Characteristic Leaching Procedure (TCLP). The TCLP procedure is SW-846 1311, and no other method shall be used unless demonstrated to the WMP that an alternative method is acceptable [see 40 CFR 260.11(c)(3)]. Any revisions to GAR Fuels Laboratory's Standard Operating Procedures shall be notified as a modification to GAR's Waste Analysis Plan.

A written response documenting actions taken to correct the violations is required within 15 days of your receipt of this letter and report.

If you have any questions regarding the report or would like to schedule a time to meet in person, please contact Ms. Cheyenne Bure at (573) 751-0752 or in writing at Missouri Department of Natural Resources, Waste Management Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

Nicole Eby
Chief, Hazardous Waste Enforcement Unit

c: Chris Wood, Air Pollution Control Program, Enforcement
Nathan Kraus, Waste Management Program, Permits
Marc Matthews, Region 7 EPA

Missouri Department of Natural Resources
Hazardous Waste Program
Report of Inspection
Green America Recycling, L.L.C.
10107 Highway 79, Hannibal, Ralls County
MOD054018288
July 8, 2020

On July 8, 2020, a site visit was conducted at Green America Recycling by Nathan Kraus, Jillian Hunt and I, Caroline Wainaina. The purpose of the site visit was to determine if the Solidification and Special Blending Unit/ Storage Area (SSTU\SA) and the hydropupler all located in Feed Prep #2 were ready to operate prior to approving a permit modification request submitted by Green America on June 24, 2020.

We met Talya Mayfield, GAR Environmental Health and Safety Manager and Troy Hart MSHA onsite inspector. After a brief meeting discussing procedure for the day we went to Feed Prep #2.

We went to Feed Prep #2 where we looked at the equipment associated with the Special Blending Treatment Unit/Storage Area and hydropulper. Waste in the SSTU\SA is transferred to a hopper located near the southeast corner of the SSTU\SA and conveyed to the hydropulper via three augers in series. There is an oxygen sensor on the incline auger. Waste drums are lifted from a conveyor to a station where the drum lid is removed and the contents were removed and transferred to the hydropulper via the third hopper. These wastes are mixed with liquid wastes piped from the tank farm. The blended mixture is pumped back to the tank farm. The metal pan under the hydropulper was damaged (Photographs 1 & 2). Talya Mayfield stated that Feed Prep #2 floor provided secondary containment. A trench and sump was observed near the pan (Photo 2). There was liquid observed in the trench and sump. The red container was empty. Solids in the hydropulper are periodically removed. Any liquids that accumulate are reprocessed in the hydropulper while solids are processed in Feed Prep #1.

We then observed facility personnel working in the SSTU\SA. Our observations were mainly from the breezeway (northeast corner of Feed Prep #2) connecting Container Storage Area #4 and Feed Prep #2. An end-dump containing petroleum sludge was backed into the SSTU\SA and then unloaded. Plastic lining the interior of the end-dump was also removed. The end-dump left and a while later a skid steer was brought to the SSTU/SA. The overhead door east of the SSTU\SA was open we could smell the sludge waste. When the overhead door was closed the sludge odor was not detected to the exterior of the door. Slight odor was occasionally detected from breezeway.

A facility employee used the skid steer to scoop and transfer the sludge to the hopper. Kiln dust was periodically spread on the SSTU\SA floor to provide traction for the skid steer. A second employee was at the controls. Troy Hart MSHA Inspector observed operations inside the building. It was a hot and calm day and GAR employees and Troy Hart took multiple breaks to cool down and hydrate.

Required Actions

1. Air in the SSTU\SA and in Feed Prep #2 vents to the kiln with a carbon canister system for backup when the kiln is not operating. As discussed above sludge odors were detected outside the Feed Prep #2. Talya Mayfield stated that T-procedure calculations had shown that negative air is maintained even when doors were open. After the site visit Green America submitted 2018 documentation of the T-procedure calculations with engineering controls in-place and recommended. WMP Permits has determined that when operating the SSTU\SA, Green America cannot control air emissions from Feed Prep #2 with the air plastic curtain and overhead door open.

2. Liquid was observed in the trench and sump near the hydropulper. Regulation 10 CSR 25-7.264 incorporating 40 CFR 264.1101(b)(2)(ii) requires that liquids accumulating in secondary containment be removed at the earliest practicable time to minimize hydraulic head on the containment system.

3. Air monitoring equipment in Feed Prep #2 may have been shut down following the April 11, 2020 shredder explosion in the Ball Mill Room. Green America must ensure that all monitoring equipment is operational prior to beginning operations in Feed Prep #2.

4. Waste Management Program Permits Section is requesting revisions to the facility waste analysis plan, contingency plan, employee training plans and standard operating procedures for units and processes no longer operating as a result of the April 11, 2020 explosion. Prior to beginning operations Green America must meet the standards outlined in Part I Permit.

REPORT PREPARED BY:

Caroline Wainaina

Caroline N. Wainaina
Environmental Specialist
Enforcement Unit
Compliance and Enforcement Section
Waste Management Program

REPORT APPROVED BY:

Nicole Eby
Environmental Supervisor
Enforcement Unit
Compliance and Enforcement Section
Waste Management Program

Attachment:
Photo Log (Photos #1 – 2)

Photo 1 of 2
Damaged pan under hydropulper. Note empty hopper on the pan.
Green America Recycling. Hannibal Missouri
MOD 054018288
Caroline Wainaina
July 8, 2020

Photo 2 of 2
Empty hopper and hydropupler pan. Note sump and trench on floor.
Green America Recycling. Hannibal Missouri
MOD 054018288
Caroline Wainaina
July 8, 2020